

**REMARKS**

Claims 1-13, 14-17 and 26-33 remain pending in the application. Claims 2, 4-7, 10-17 and 31 are currently withdrawn from consideration. Claims 1, 3, 28, 30, 31 and 33 are currently amended. Reconsideration and allowance of the application, as amended, are respectfully requested.

**Objection to the Claims**

Claim 28 stand objected to for an informality. In view of the foregoing amendments, it is respectfully submitted that this informality has been addressed. Reconsideration and withdrawal of any objection to the claims are respectfully requested.

**Rejections under 35 USC 112**

Claims 1, 3, 8, 9, 26-30 and 32 stand rejected under 35 USC 112, second paragraph. This rejection is respectfully traversed.

In view of the foregoing amendments, it is respectfully submitted that all claims particularly point out and distinctly claim the subject matter of the instant invention. Reconsideration and withdrawal of the 35 USC 112, second paragraph rejection are respectfully requested.

Claim 30 stands rejected under 35 USC 112, first paragraph. This rejection is respectfully traversed.

The Examiner asserts that there is no support in the specification for the limitation of " $H_xTiO_{[(3-x)/2+x]}$ " in claim 30. Claim 30 is currently amended to address this rejection. Withdrawal is respectfully requested.

*Rejections under 35 USC 103*

Claims 1, 3, 8, 9, 30, 32 and 33 stand rejected under 35 USC 103 as being unpatentable over Kawakatsu, U.S. Patent 6,242,862, in view of Nakabayashi, EP 1,136,125 and Toki et al., U.S. Publication 2004/0197254. This rejection is respectfully traversed.

Claim 26 stands rejected under 35 USC 103 as being unpatentable over Kawakatsu in view of Nakabayashi in view of Rengakuji et al., U.S. Patent 6,602,607. This rejection is respectfully traversed.

Claim 27 stands rejected under 35 USC 103 as being unpatentable over Kawakatsu in view of Nakabayashi, and further in view of Mori et al., U.S. Patent 6,420,437. This rejection is respectfully traversed.

Claim 27 stands rejected under 35 USC 103 as being unpatentable over Kawakatsu in view of Nakabayashi and further in view of Boykin et al., U.S. Publication 2004/0112411. This rejection is respectfully traversed.

Claim 28 stands rejected under 35 USC 103 as being unpatentable over Kawakatsu in view of Nakabayashi and further in view of Baiker et al., U.S. Patent 5,935,895. This rejection is respectfully traversed.

Claim 29 stands rejected under 35 USC §103 as being unpatentable over Kawakatsu in view of Nakabayashi and further in view of Tabatabaie-Raissi et al., U.S. Patent 6,309,611. This rejection is respectfully traversed.

"To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." MPEP §2143.03. Applicants respectfully submit that all of the limitations of claim 1, as currently amended, are not taught or suggested by the

prior art. The prior art does not teach or suggest baking at a temperature of 150-200°C as presently claimed. The prior art also does not disclose or suggest combining the titanium alkoxide  $Ti(OR)_4$  with the chelating agents: Eu or a rare earth metal salt to form a  $TiO_2$ -SCA gel as recited in the claims as currently amended. Accordingly, all of the limitations of the present claims are not disclosed or suggested by the prior art, and the pending prior art rejections must be withdrawn.

The Examiner asserts that Kawakatsu discloses a method in which the baking step is carried out at a temperature above 200°C. However, the temperature of the baking step in the presently claimed invention is around 100-200°C. Kawakatsu specifically teaches in column 4 that high-temperature baking is used in his invention. Accordingly, it cannot be maintained that Kawakatsu discloses or suggests the low temperature baking step of 150 - 200°C recited in the present claims. Applicants submit that all of the pending prior art rejections must therefore be withdrawn.

In addition, claims 1 and 33 are currently amended to further specify combining the titanium alkoxide  $Ti(OR)_4$  with the chelating agents: Eu or a rare earth metal salt, and an aqueous solution to form a  $TiO_2$ -SCA gel. Kawakatsu nowhere discloses or suggests using the chelating agents recited in claim 1. Accordingly, the prior art does not disclose or suggest all of the limitations of the present claims as currently amended. Applicants respectfully submit therefore that all of the limitations of the present claims are not disclosed or suggested by the prior art, and the pending prior art rejections must be withdrawn.

**Conclusion**

Favorable reconsideration and an early Notice of Allowance are earnestly solicited.

Because the additional prior art cited by the Examiner has been included merely to show the state of the prior art and has not been utilized to reject the claims, no further comments concerning this document are considered necessary at this time.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), the Applicants respectfully petition for a one (1) month extension of time for filing a response in connection with the present application and the required fee of \$60.00 is attached herewith.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Mark Konieczny (Reg. No. 47,715) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

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